



## Automatic Speech Recognition and Understanding in Air Traffic Management

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### Message from the Guest Editors

Dear Colleagues,

Since Alexa, OK Google and Siri at the latest, voice recognition has become part of everyday life. It does not only allow us to keep our hands free, when we speak a new address into the navigation system, but it can also reduce workload of air traffic controllers (ATCo) and increases air traffic management (ATM) safety.

Voice communication between ATCos and pilots using radio equipment is still widely used in air traffic control (ATC). The ATCo issues verbal commands to the cockpit crew. Whenever the information from voice communication has to be digitized, ATCos are burdened to enter the information – that has already been uttered – manually. Research results show that up to one third of the working time of controllers is spent on these manual inputs. Radar label maintenance is one application of automatic speech recognition and understanding (ASRU). Long known is the support of simulation pilots by ASRU. Another area is, e.g., offline evaluation of historic ATCo-pilot communication to answer questions like:





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